

UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

_____	)	
PENNENVIRONMENT, INC., and CLEAN	)	
AIR COUNCIL,	)	
	)	
Plaintiffs,	)	Civil Action No.: _____
	)	
v.	)	
	)	
UNITED STATES STEEL	)	<b>COMPLAINT</b>
CORPORATION,	)	
	)	
Defendant.	)	
_____	)	

**INTRODUCTION**

1. This is a citizen enforcement suit brought by two non-profit environmental organizations, on behalf of their individual members, to redress and prevent Clean Air Act violations that negatively affect the health and lives of Pennsylvania residents by repeatedly exposing them to harmful air pollutants.

2. Defendant United States Steel Corporation (“U.S. Steel”) owns and operates a group of integrated steel production facilities in Allegheny County, Pennsylvania, which include the Clairton Coke Works (“Clairton Works”) and two steel mills, the Irvin Plant and the Edgar Thomson Plant (all three collectively, the “Plants”).

3. U.S. Steel has repeatedly violated the federal Clean Air Act (“CAA” or “Act”), the Pennsylvania State Implementation Plan (“SIP”), including Allegheny County Health Department Rules and Regulations Article XXI (“Article XXI”), and the applicable CAA operating permits at the three Plants.

4. The violations that are the subject of this suit stem primarily from U.S. Steel's decision to continue operating the Plants at close to full capacity for several months while air pollution controls were offline following a fire on December 24, 2018.

5. The Plants' operations, design, age, and history of non-compliance with emission standards and limitations demonstrate that these violations are likely to recur.

6. U.S. Steel's violations include: creating conditions of air pollution in the communities surrounding the Plants; operating the Plants without required pollution control equipment; combusting gases as fuel or in flares that contain pollutants at levels that exceed permitted limits; and emitting air pollutants into the atmosphere in excess of numeric emission limits.

7. Plaintiffs are unaware of any actions taken by U.S. Steel that are sufficient to prevent future violations of the types alleged in Counts I through IV. Absent an appropriate order from this Court U.S. Steel is likely to repeat its violations of the Act as described in Counts I through IV. Plaintiffs intend this action to encompass post-Complaint violations of the types alleged in Counts I through IV.

#### **CITIZEN ENFORCEMENT SUITS UNDER THE CLEAN AIR ACT**

8. Congress has declared that the purpose of the CAA is "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." 42 U.S.C. § 7401(b)(1).

9. In the "citizen suit" provision of the CAA, Congress authorized any person to commence a civil action against any person who is alleged to have violated (if there is evidence

that the alleged violation has been repeated) or to be in violation of an emission standard or limitation under the CAA. 42 U.S.C. § 7604(a)(1).

10. The CAA defines each of the following as an “emission standard or limitation”:
  - a. any standard or limitation established “under any permit issued pursuant to subchapter V” of the CAA (42 U.S.C. § 7604(f)(4));
  - b. any standard or limitation established “under any applicable State implementation plan approved by the Administrator” (42 U.S.C. § 7604(f)(4));
  - c. “any permit term or condition” (42 U.S.C. § 7604(f)(4));
  - d. any “emission limitation, standard of performance, or emission standard” (42 U.S.C. § 7604(f)(1)); and
  - e. “any condition or requirement of a permit under part C of subchapter I of this chapter (relating to significant deterioration of air quality) or Part D of subchapter I of this chapter (relating to nonattainment)” (42 U.S.C. § 7604(f)(3)).

11. The Clean Air Act directs each state or local air pollution control agency to develop a State Implementation Plan (“SIP”) that describes how it will achieve and maintain compliance with National Ambient Air Quality Standards (“NAAQS”) set by the United States Environmental Protection Agency (“EPA”) to protect human health and the environment. Pennsylvania has an EPA-approved SIP. Allegheny County Health Department Rules and Regulations Article XXI is part of the Pennsylvania SIP.

12. The Clean Air Act directs each state to develop a permit program under state or local law that meets the requirements of subchapter V (or “Title V”) of the CAA for review and approval by EPA. 42 U.S.C. § 7661a(d).

13. The Allegheny County Health Department (“ACHD”) issues operating permits under Title V of the CAA to facilities located in Allegheny County, Pennsylvania. 40 C.F.R. Part 70, App. A.

14. ACHD’s Title V Partial Operating Permit Program is governed by Article XXI. EPA granted final full approval of the Allegheny County Title V Partial Operating Permit Program, effective December 17, 2001. 66 Fed. Reg. 55,112-15 (November 1, 2001).

15. In this action, Plaintiffs allege U.S. Steel has violated the Plants’ operating permits issued under Title V of the CAA, under standards and limitations contained in the Pennsylvania SIP, and under federally-established emission limitations and standards of performance that relate to coke plants and steel processing facilities.

16. The CAA citizen suit provides district courts with jurisdiction to “enforce” emission standards and limitations, and to impose an appropriate civil penalty on the violator of those emission standards and limitations. 42 U.S.C. § 7604(a). Such civil penalties are deposited in a special fund of the United States Treasury to be used by EPA to finance air compliance and enforcement activities, although the Court has the discretion to order that up to \$100,000 of such civil penalties instead be used to fund beneficial mitigation projects that are consistent with the CAA and enhance the public health or the environment. 42 U.S.C. § 7604(g)(2).

17. Terms and conditions in a Title V permit are enforceable by citizens under the CAA. 42 U.S.C. § 7604(f)(4); 57 Fed Reg. 32,350 (Jul. 21, 1992).

#### **JURISDICTION, VENUE, AND NOTICE**

18. Subject matter jurisdiction is conferred upon this Court by 33 U.S.C. § 7604(a) (CAA citizen suit jurisdictional provision) and 28 U.S.C. § 1331 (federal question jurisdiction).

19. Venue lies in this District pursuant to 42 U.S.C. § 7604(c)(1) (CAA citizen suit venue provision), and 28 U.S.C. § 1391(e) (federal venue provision) because the Plants are stationary sources located within this District.

20. Plaintiffs gave Defendant notice of the violations alleged in this Complaint more than 60 days prior to commencement of this lawsuit by a letter (the “Notice Letter”) mailed to: Kurt Barshick, who is the General Manager of the Plants, and David Burritt, who is the President of U.S. Steel. A copy of the Notice Letter is attached as Exhibit 1. The Notice Letter is incorporated by reference herein.

21. Both Mr. Barshick and Mr. Burritt received the Notice Letter. Plaintiffs also mailed a copy of the Notice Letter to Prentice-Hall Corporation System, Inc., as Pennsylvania registered agent for U.S. Steel. A copy of the return receipt for each of these three recipients is attached in Exhibit 2.

22. Copies of the Notice Letter were also mailed to the Administrator of the EPA, the Regional Administrator of the EPA for Region III, the Director of the Allegheny County Health Department (“ACHD”), the Deputy Director of ACHD’s Environmental Health Bureau, the Deputy Director for Waste, Air, Radiation, and Remediation of the Pennsylvania Department of Environmental Protection, and the Governor of the Commonwealth of Pennsylvania.

23. Each of the addressees identified in the preceding paragraph received the Notice Letter. A copy of each return receipt is attached as Exhibit 3.

24. The Notice Letter satisfies the pre-suit notice requirements of the CAA, pursuant to 42 U.S.C. § 7604(b).

25. Neither ACHD nor the State of Pennsylvania nor EPA has commenced a civil action against U.S. Steel in court to enforce the violations described in this Complaint.

**PARTIES**

26. Plaintiff PennEnvironment, Inc. (“PennEnvironment”) is a non-profit Pennsylvania corporation with over 11,000 members, including 2,259 members in Allegheny County. PennEnvironment advocates for clean air, clean water, and the preservation of Pennsylvania’s natural resources.

27. PennEnvironment researches and distributes analytical reports on environmental issues, advocates before legislative and administrative bodies, engages in litigation when necessary, and conducts public education programs.

28. PennEnvironment has members who live and own or rent property near the Plants, and who are adversely affected by illegal pollutant emissions from the Plants.

29. Plaintiff Clean Air Council (“CAC”) is a non-profit Pennsylvania corporation dedicated to protecting and defending the right to a healthy environment. CAC has 37,000 members, including members in Allegheny County.

30. CAC forwards its mission through sustainability and public health initiatives, using public education, community action, government oversight, and enforcement of environmental laws.

31. CAC has members who live and own or rent property near the Plants, and who are adversely affected by illegal pollutant emissions from the Plants.

32. Plaintiffs bring this suit on behalf of their individual members who are adversely affected by U.S. Steel’s unlawful emissions of hydrogen sulfide, sulfur dioxide, particulate matter, and other air pollutants, and by other violations of emission standards and limitations at the Plants.

33. The Plants' violations have harmful impacts on public health and the environment in the areas where Plaintiffs' members live, work, and recreate.

34. "Person" in the CAA is defined to include "corporation." 42 U.S.C. § 7602(e). PennEnvironment and CAC are corporations and thus "persons" under the CAA.

35. Defendant U.S. Steel is a publicly traded, for-profit corporation organized under the laws of Delaware and headquartered at 600 Grant Street, in Pittsburgh, Pennsylvania.

36. U.S. Steel is the third largest steel producer in the United States.

37. The Clean Air Act operating permits for the Plants issued under Title V of the CAA are in the name of U.S. Steel.

38. Clairton Works is located at 400 State Street in Clairton, Pennsylvania. Clairton Works' Title V Operating Permit Number is 0052.

39. The Irvin Plant is located off Camp Hollow Road in West Mifflin, Pennsylvania. The Irvin Plant's Title V Operating Permit Number is 0050.

40. The Edgar Thomson plant is located at 13<sup>th</sup> Street and Braddock Avenue in Braddock, Pennsylvania. The Edgar Thomson Plant's Title V Operating Permit Number is 0051.

41. U.S. Steel is a corporation and thus a "person" within the meaning of section 302(e) of the Act, 42 U.S.C. § 7602(e).

### **FACTUAL BACKGROUND**

#### **A. The Plants**

42. The three Plants, together with the Fairless Plant in Fairless, Pennsylvania, constitute U.S. Steel's Mon Valley Works. The Mon Valley Works produce as much as 2.9 million tons of raw steel per year.

43. Coke is used in the process of making steel. Coke is the most common source of carbon used to convert iron oxides into steel.

44. Coke is made from coal. Coke is made by heating coal in coke oven batteries to remove impurities. The outputs of this process include coke, which is almost pure carbon, and coke oven gas (“COG”).

45. COG is a heterogeneous mixture that contains variable levels of, among other substances, hydrogen ( $H_2$ ), methane ( $CH_4$ ), carbon monoxide (CO), ammonia ( $NH_3$ ), hydrogen sulfide ( $H_2S$ ), and volatile organic compounds (VOCs), including benzene, toluene, and xylene. COG is highly flammable.

46. Clairton Works has ten coke oven batteries. Each battery has numerous coke ovens. Clairton Works produces approximately 4.3 million tons of coke per year and approximately 215 million cubic feet of COG per day.

47. Clairton Works has a Light Oil Recovery facility that is used to remove benzene, toluene, xylene and other pollutants from the COG produced at Clairton Works.

48. Clairton Works has a coke oven gas desulfurization plant (“the Desulfurization Plant”) that is used to remove  $H_2S$  and other pollutants from the COG.

49. The Desulfurization Plant includes, among other things, two Claus Plants, a Shell Claus Off-gas Treating (“SCOT”) Plant incinerator, and a Hydrogen Cyanide Destruction Unit.

50. Under the terms of the Clairton Works Title V permit, U.S. Steel is required to use the Desulfurization Plant to “treat” (*i.e.*, remove sufficient amounts of pollutants from) all of the COG produced at Clairton Works before the COG may be combusted in flares or repurposed as fuel at any of the three Plants.



51. When COG containing  $\text{H}_2\text{S}$  is combusted in flares, boilers, or other combustion devices, the combustion process turns  $\text{H}_2\text{S}$  into sulfur dioxide ( $\text{SO}_2$ ), which is released to the atmosphere; any uncombusted  $\text{H}_2\text{S}$  is also released to the atmosphere. Prior removal of  $\text{H}_2\text{S}$  from COG thus reduces the amount of  $\text{H}_2\text{S}$  and  $\text{SO}_2$  released to the atmosphere when the COG is combusted as fuel or in flares.

52. Similarly, prior removal of benzene, toluene, and xylene from COG in the Light Oil Recovery facility reduces the amount of those pollutants that are released to the atmosphere when the COG is combusted as fuel or in flares.

53. Under normal operating conditions at Clairton Works, COG comprises 100% of the fuel used as “underfire” gas to heat the coke oven batteries, 87% of the fuel for Boiler No. 1, and 100% of the fuel for Boiler No. 2.

54. Clairton Works emits  $\text{H}_2\text{S}$  into the atmosphere.

55. Clairton Works emits  $\text{SO}_2$  into the atmosphere.

56. Clairton Works emits particulate matter into the atmosphere.

57. Clairton Works emits benzene, toluene, and xylene into the atmosphere.

58. Clairton High School, Clairton Elementary School, the Miller Avenue School, and Clairton Public Library are within three-quarters of a mile of Clairton Works. Sundry and grocery stores, including Rite Aid, Dollar General, and Family Dollar, are within one mile or less of Clairton Works. Morning Star Baptist Church, Gethsemane Church of God, and St. Clare of Assisi Parish are within one-half mile of Clairton Works.

59. According to the EPA, 2,938 people live within one mile of Clairton Works and 36,439 people live within three miles.

60. In addition to using COG for fuel at Clairton Works, U.S. Steel also sends COG generated at Clairton Works through pipes to the Irvin Plant and the Edgar Thompson Plant, where it is used as fuel or combusted in flares.

61. The Irvin Plant is a secondary steel processing facility which produces steel sheets. It has a hot strip mill, two pickling lines, a cold reduction mill, three annealing facilities, a temper mill, and two hot dip galvanizing lines.

62. Under normal operating conditions at the Irvin Plant, COG comprises 90 to 95% of the fuel for Boilers Nos. 1, 2, 3, and 4, 75% of the fuel for the hot strip mill, and 90 to 95% of the fuel for its three annealing furnaces.

63. The Irvin Plant has five flares, identified as COG Flares 1, 2, and 3, and Peachtree A & B Flares.

64. The Irvin Plant emits H<sub>2</sub>S into the atmosphere.

65. The Irvin Plant emits SO<sub>2</sub> into the atmosphere.

66. The Irvin Plant emits particulate matter into the atmosphere.

67. The Irvin Plant emits benzene, toluene, and xylene into the atmosphere.

68. Clara Barton Elementary School and the Community College of Allegheny County are within one and one-quarter miles of the Irvin Plant. Sundry and grocery stores in the town of Glassport, including Rite Aid, Dollar Tree, and Family Dollar, are approximately one mile from the Irvin Plant. Queen of the Rosary Church and Kingdom Hall of Jehovah's Witnesses are within one mile of the Irvin Plant. The Kane Community Living Center, an assisted living facility, is two miles from the Irvin Plant.

69. According to the EPA, 5,452 people live within one mile of the Irvin Plant and 64,934 people live within three miles.

70. The Edgar Thompson Plant is an iron and steel making facility that mainly produces steel slabs. Raw materials such as coke, iron-bearing materials, and fluxes are charged in blast furnaces in the iron- and steel-making processes. The Edgar Thompson Plant has two blast furnaces, two steelmaking vessels, a vacuum degassing unit, and a slab caster.

71. Under normal operating conditions at the Edgar Thompson Plant, COG comprises 4% of the fuel for its boilers, 50% of the fuel for its blast furnaces, and 1 to 2% of the fuel for Stoves Nos. 1 and 3.

72. The Edgar Thompson Plant emits H<sub>2</sub>S into the atmosphere.

73. The Edgar Thompson Plant emits SO<sub>2</sub> into the atmosphere.

74. The Edgar Thompson Plant emits particulate matter into the atmosphere.

75. The Edgar Thompson Plant emits benzene, toluene, and xylene into the atmosphere.

76. Fairless Elementary School, an Elks Lodge, the Braddock Carnegie Library, and a Post Office are less than one-half mile from the Edgar Thompson Plant. Homeville Elementary School, West Mifflin Area High School, West Mifflin Area Middle School, the Bell Avenue School, and the Lowell School are all less than one and one-quarter miles from the Edgar Thompson Plant. Family Dollar is approximately one-half mile from the Edgar Thompson Plant. Good Shepherd Catholic Parish Church, First Church of God in Christ, and Holliday Memorial AME Zion are within one-half mile of the Edgar Thompson Plant.

77. According to the EPA, 6,774 people live within one mile of the Edgar Thompson Plant and 90,100 people live within three miles.

**B. The December 24, 2018 Fire**

78. At 4:34 a.m. on December 24, 2018, a fire broke out at Clairton Works in the No.

2 Control Room (the “Fire”).

79. The Fire resulted in the immediate shutdown of the No. 2 Control Room and the No. 5 Control Room at Clairton Works.

80. The No. 2 Control Room houses, among other things, a cryogenic gas separation facility and the Light Oil Recovery facility.

81. The No. 5 Control Room houses, among other things, the Desulfurization Plant.

82. Under normal operating conditions, 100% of the COG generated at Clairton Works is processed in the No. 2 Control Room. As part of that processing, it is separated into different gas streams.

83. One of those gas streams, the sulfur-containing gas stream, also known as the carbonate feed gas, represents about 15% of total COG volume. This stream is sent from No. 2 Control Room to No. 5 Control Room for sulfur removal.

84. If No. 2 Control Room cannot be operated, U.S. Steel cannot operate No. 5 Control Room, because there is no piping directly connecting No. 1 Control Room to No. 5 Control Room, and because the amount of COG would be too large for No. 5 Control Room to handle.

85. The shutdown of the Nos. 2 and 5 Control Rooms in December resulted in U.S. Steel by-passing the various air pollution control units housed in those facilities, and sending untreated COG to be combusted at the three Plants as fuel and in flares.

86. In its prepared remarks for a hearing before the Pennsylvania Senate and House Democratic Policy Committees on February 7, 2019, U.S. Steel stated that “the fire originated from a mechanical failure in the C-521 vacuum machine area.”

87. Upon information and belief, the Fire was caused by an avoidable mechanical failure.

88. The location and impacts of the Fire were such that U.S. Steel was not able to use the No. 2 Control Room, the No. 5 Control Room, or its Desulfurization Plant to treat any of the COG generated by the Clairton Works coke oven batteries for a period of several months.

**C. The Aftermath of the Fire**

89. U.S. Steel continued to operate the Clairton Works coke oven batteries and to produce coke after the Fire.

90. By continuing to produce coke at Clairton Works, U.S. Steel continued to produce COG.

91. From the time of the Fire until at least April 4, 2019, COG was not treated for pollution removal at the Desulfurization Plant or the other air pollution control devices in Nos. 2 and 5 Control Rooms.

92. From the time of the Fire until at least April 4, 2019, “Raw COG” (*i.e.*, COG that had not been treated to remove pollutants), was used as fuel at the Plants and combusted in flares at the Plants.

93. On January 7, 2019, U.S. Steel reported to ACHD that it had reduced the proportion of Raw COG it used as fuel in various production units, relative to its normal operations.

94. To make up for the reduced amount of COG it used to fuel various production units, U.S. Steel mixed Raw COG with added natural gas.

95. According to the first mitigation plan U.S. Steel filed with ACHD on January 7, 2019, U.S. Steel used Raw COG as fuel in the following proportions:

- a. Clairton Works used Raw COG as 60% of the fuel for “underfire” gas (which is used to heat the coke ovens in the batteries), 10 to 20% of the fuel for Boiler No. 1, and 10 to 20% of the fuel for Boiler No. 2;
- b. The Irvin Plant used Raw COG as 5-10% of the fuel for Boilers No. 1, 2, 3, and 4, 50 to 60% of the fuel for the hot strip mill, and 5 to 10% of the fuel for its three annealing furnaces;
- c. The Edgar Thompson Plant discontinued use of Raw COG as fuel for its blast furnaces but continued using Raw COG as 2 to 3% of the fuel for its boilers and 1% of the fuel for Stoves Nos. 1 and 3.

96. All of the Raw COG that was diverted from use as fuel at the Plants was nonetheless still combusted; it was flared directly into the atmosphere by flares at the Irvin Plant.

97. From December 24, 2018, until at least April 4, 2019, the Plants emitted far more SO<sub>2</sub> and H<sub>2</sub>S into the atmosphere each day than they emit when the Clairton Works pollution control devices are operating as intended.

98. Increased emissions of SO<sub>2</sub> from December 24, 2018, until at least April 4, 2019, led to increased levels of PM in the atmosphere.

99. From December 24, 2018, until at least April 4, 2019, the Irvin Plant flares emitted far more SO<sub>2</sub>, H<sub>2</sub>S, and volatile organic compounds, including benzene, each day than they emit when they are not flaring Raw COG and when they are flaring smaller volumes of COG.

100. On April 4, 2019, U.S. Steel announced that it was “now desulfurizing 100% of the coke oven gas generated at our Clairton Plant.” U.S. Steel described this as “an important

milestone in our repair efforts” and explained that it would “continue to monitor and adjust coking times as appropriate.”

101. Upon information and belief, as of April 4, 2019, U.S. Steel remained unable to desulfurize the full amount COG that would be generated at Clairton Works at full production capacity; U.S. Steel’s ability to desulfurize “100% of the coke oven gas generated” at Clairton Works was a function of reduced production resulting in reduced COG generation.

102. Upon information and belief, as of the date of this Complaint, Clairton Works is operating at approximately 70% capacity.

103. Upon information and belief, no changes have been made to the design or layout of the Desulfurization Plant or No. 2 or No. 5 Control Rooms as described in paragraphs 78-82 above.

#### **ADVERSE EFFECTS OF POLLUTANTS EMITTED FROM THE PLANTS**

104. Hydrogen sulfide (H<sub>2</sub>S) is a colorless and flammable gas.

105. H<sub>2</sub>S is a harmful air pollutant.

106. According to the Agency for Toxic Substances and Disease Registry (ATSDR), when released into the air, hydrogen sulfide can remain in the air from 1 to 42 days, depending on the season. [https://www.epa.gov/sites/production/files/2017-12/documents/appendix\\_e-atsdr\\_h2s\\_factsheet.pdf](https://www.epa.gov/sites/production/files/2017-12/documents/appendix_e-atsdr_h2s_factsheet.pdf).

107. H<sub>2</sub>S has a “rotten egg” smell.

108. H<sub>2</sub>S is both an irritant and a chemical asphyxiant, and has adverse effects on both oxygen utilization and the central nervous system. Low concentrations of H<sub>2</sub>S irritate the eyes, nose, throat, and respiratory system (e.g., low concentrations of H<sub>2</sub>S can cause a burning sensation or tearing of eyes, coughing, and/or shortness of breath), can cause asthmatics to

experience breathing difficulties, and can cause headaches, poor memory, tiredness, and balance problems.

109. Sulfur dioxide (“SO<sub>2</sub>”) is one of six “criteria pollutants” identified by EPA, and subject to national ambient air quality standards (“NAAQS”). 42 U.S.C. §§ 7408(a), 7409(b).

110. SO<sub>2</sub> has a pungent odor.

111. Exposure to SO<sub>2</sub> can cause respiratory illness, aggravation of asthma, other adverse effects on breathing, alterations in pulmonary defenses, and aggravation of existing cardiovascular disease.

112. Exposure to high levels of SO<sub>2</sub> can cause chronic hypersensitivity to a wide range of respiratory irritant pollutants.

113. Children, the elderly, and people with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are particularly susceptible to the adverse health effects of SO<sub>2</sub>.

114. Sulfates are secondary particles formed from SO<sub>2</sub> emissions.

115. Sulfates contribute to the formation of acid rain, which is associated with acidification of lakes and streams, accelerated corrosion of buildings and monuments, reduced visibility, and adverse health effects.

116. SO<sub>2</sub> exposure has been linked to central nervous system disease and disorders, including heightened incidence of stroke and seizure.

117. SO<sub>2</sub> poses significant health threats.

118. SO<sub>2</sub> forms fine droplets that create Particulate Matter (“PM”), specifically PM 2.5 (particulate matter less than 2.5 microns in diameter).



119. PM, also known as soot, is a complex mixture of extremely small particles and liquid droplets.

120. PM is made up of components such as acids (*e.g.*, nitrates and sulfates), organic chemicals, metals, and soil or dust particles.

121. PM is a criteria pollutant identified by EPA and subject to NAAQS. 42 U.S.C. §§ 7408(a), 7409(b).

122. PM exposure has been linked to premature death in people with heart or lung disease, non-fatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (such as irritation of the airways, coughing, or difficulty breathing).

123. PM exposure has been linked to exacerbations of central nervous system disorders and disease, including Alzheimer's Disease, Parkinson's Disease, strokes, and neurodevelopmental disorders.

124. PM exposure has been linked to perinatal, neonatal, and pediatric central nervous system disorders, including increased rates of Autism Spectrum Disorders and Attention Deficit/Hyperactivity Disorder.

125. PM exposure has been linked to increased incidence of mental health disorders.

126. PM causes haze.

127. The settling of PM on ground or water contributes to acidification, to nutrient depletion and imbalance, and to reductions in ecosystem diversity.

128. Volatile organic compounds ("VOCs") include a variety of chemicals, some of which have short- and long-term adverse health effects.

129. Health effects from VOCs can include: eye, nose and throat irritation; headaches; loss of coordination; nausea; damage to liver, kidney, and central nervous system. Some VOCs can cause cancer in animals, some are suspected or known to cause cancer in humans.

130. Benzene is a VOC and is designated a Hazardous Air Pollutant under the CAA.

131. Benzene is a known human carcinogen. Benzene exposure can also cause neurological harm in humans and animals.

**THE PLANTS ARE SUBJECT TO  
THE PROVISIONS OF THEIR TITLE V PERMITS**

132. Subject to EPA approval and oversight, Allegheny County Health Department (“ACHD”) administers a Partial Operating Permits Program for major sources of air pollutants in Allegheny County under Title V of the CAA, 42 U.S.C. §§ 7401, *et seq.*

133. The operations of Clairton Works are subject to Title V Operating Permit Number 0052 (“Clairton Permit”).

134. ACHD issued the Clairton Permit to U.S. Steel on March 27, 2012. It was scheduled to expire on March 26, 2017, but because U.S. Steel timely applied to renew it, the Clairton Permit remains in effect until a renewed permit is issued.

135. As of the date of this Complaint, ACHD has not issued a renewed Title V permit for Clairton Works and the Clairton Permit remains in effect.

136. Pursuant to Clairton Permit General Condition III.39, on September 14, 2017, ACHD issued Installation Permit 0052-I017 (“Clairton Installation Permit”) to U.S. Steel to account for updates U.S. Steel sought to make to Clairton Works and to revise certain SO<sub>2</sub> emission limits for Clairton Works as “necessary to decrease ambient sulfur dioxide to levels sufficient to meet the 1-hour NAAQS.”

137. The operations of the Irvin Plant are subject to Title V Operating Permit Number 0050 (“Irvin Permit”).

138. ACHD issued the Irvin Permit to U.S. Steel on December 9, 2016. It expires on December 8, 2021.

139. Pursuant to Irvin Permit General Condition III.40, on September 14, 2017, ACHD issued Installation Permit 0050-I008 (“Irvin Installation Permit”) to U.S. Steel to revise certain SO<sub>2</sub> emission limits at the Irvin Plant as “necessary to decrease ambient sulfur dioxide to levels sufficient to meet the 1-hour NAAQS.”

140. The operations of the Edgar Thompson Plant are subject to Title V Operating Permit Number 0051 (“Edgar Thompson Permit”).

141. ACHD issued the Edgar Thompson Permit to U.S. Steel on April 13, 2016. It expires on April 12, 2021.

142. Pursuant to Edgar Thompson Permit General Condition III.40, on September 14, 2017, ACHD issued Installation Permit 0051-I008 (“Edgar Thompson Installation Permit”) to revise certain SO<sub>2</sub> emission limits at the Edgar Thompson Plant as “necessary to decrease ambient sulfur dioxide to levels sufficient to meet the 1-hour NAAQS.”

143. The Clairton Permit, Irvin Permit, and Edgar Thompson Permit (collectively, the “Permits”) each provide: “It shall be a violation of this permit to fail to comply with, or to cause or assist in the violation of, any requirement of this permit, or any order or permit issued pursuant to authority granted by Article XXI.” Clairton Permit at 23; Irvin Permit at 19; Edgar Thompson Permit at 15.

144. The Permits each provide: “The permittee shall comply with all permit conditions and all other applicable requirements at all times. Any permit noncompliance constitutes a

violation of the Clean Air Act, the Air Pollution Control Act, and Article XXI and is grounds for any and all enforcement action . . .” Clairton Permit at 27; Irvin Permit at 24; Edgar Thompson Permit at 19.

145. U.S. Steel understands that it is obligated to comply with the terms of the Permits.

146. Any violation of the terms and conditions of the Permits is a violation of the federal Clean Air Act.

147. 42 U.S.C. § 7661a(a) states, “After the effective date of any permit program approved or promulgated under this subchapter, it shall be unlawful for any person to violate any requirement of a permit issued under this subchapter, or to operate ... a major source ... except in compliance with a permit issued by a permitting authority under this subchapter.”

**THE PLANTS ARE SUBJECT TO THE PROVISIONS OF THE  
PENNSYLVANIA STATE IMPLEMENTATION PLAN**

148. The Pennsylvania State Implementation Plan (“SIP”) is a set of state laws and regulations designed to protect air quality in Pennsylvania.

149. One purpose of the Pennsylvania SIP is to achieve compliance with federally promulgated national ambient air quality standards (“NAAQS”).

150. SIPs are required by Section 110 of the CAA, 42 U.S.C. § 7410, and must be approved by the EPA. Article XXI, the portion of the Pennsylvania SIP applicable to stationary sources in Allegheny County, was approved by EPA.

151. Neither Pennsylvania’s SIP nor any of the Permits includes an “emergency exemption.” ACHD has stated that no “emergency exemption” is available. *See* 66 Fed. Reg. 55,112-13 (November 1, 2001) (“The ACHD has incorporated most of the recordkeeping and reporting requirements required under part 70 for an emergency to be considered an affirmative

defense. However, consistent with Pennsylvania's program, the ACHD program does not allow an emergency to be considered an affirmative defense.").

152. The Plants are subject to provisions of the Pennsylvania SIP, including Article XXI.

153. The Permits incorporate certain provisions of the Pennsylvania SIP.

**U.S. STEEL IS REQUIRED TO REPORT VIOLATIONS OF THE PERMITS TO ACHD**

154. Each of the Permits requires U.S. Steel to report monitoring data to ACHD demonstrating compliance with and/or violations of its terms and conditions. Clairton Permit at 26-27; Irvin Permit at 22-23; Edgar Thompson Permit at 18-19.

155. Each of the Permits requires U.S. Steel to report monitoring data according to the following terms:

- a. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the Responsible Official.
- b. Prompt reporting of deviations from permit requirements is required, including those attributable to upset conditions as defined in this permit and Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.
- c. All reports submitted to the Department shall comply with the certification requirements of [this permit].

Clairton Permit at 26-27; Irvin Permit at 22-23; Edgar Thompson Permit at 18-19.

156. Each of the Permits requires U.S. Steel to make two semiannual reports each year to ACHD: one by January 31 for the period beginning July 1 and ending December 31 of the previous year, and the second by July 31 for the time period beginning January 1 and ending June 30. Clairton Permit at 26-27; Irvin Permit at 22-23; Edgar Thompson Permit at 18-19.

157. The Clairton Permit and the Irvin Permit require U.S. Steel to make quarterly reports to ACHD. Clairton Permit at 27; Irvin Permit at 23.

158. Each of the Permits requires U.S. Steel to:

maintain and make available to the Department, upon request, records, including computerized records that may be necessary to comply with the reporting and emission statements in Article XXI § 2108.01.e. Such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions.

Clairton Permit at 26; Irvin Permit at 22; Edgar Thompson Permit at 18.

159. On March 19, 2019, U.S. Steel submitted to ACHD a spreadsheet of monitoring data, which includes daily emissions of SO<sub>2</sub> (in pounds per day) and daily levels of H<sub>2</sub>S (in grains per dry standard cubic foot of gas, or “gr/dscf”), for Clairton Works from December 24, 2018, to March 16, 2018 (“Clairton Data”). The Clairton Data is attached as Exhibit 4.

160. On March 19, 2019, U.S. Steel submitted to ACHD a spreadsheet of monitoring data, which includes daily emissions of SO<sub>2</sub> (in lbs/day) and daily levels of H<sub>2</sub>S (in gr/dscf), for the Irvin Plant from December 24, 2018, to March 16, 2018 (“Irvin Data”). The Irvin Data is attached as Exhibit 5.

161. On March 19, 2019, U.S. Steel submitted to ACHD a spreadsheet of monitoring data, which includes daily emissions of SO<sub>2</sub> (in lbs/day) and daily levels of H<sub>2</sub>S (in gr/dscf), for the Edgar Thompson Plant from December 24, 2018, to March 16, 2018 (“Edgar Thompson Data”). The Edgar Thompson Data is attached as Exhibit 6.

162. On March 19, 2019, U.S. Steel submitted to ACHD a spreadsheet of monitoring data, which includes daily emissions of SO<sub>2</sub> (in lbs/day) and daily levels of H<sub>2</sub>S (in gr/dscf), for

the Mon Valley Works from December 24, 2018, to March 16, 2018 (“Mon Valley Works Data”). The Mon Valley Works Data is attached as Exhibit 7.

**U.S. STEEL’S VIOLATIONS OF THE CLEAN AIR ACT**

163. Plaintiffs incorporate ¶¶ 1-162 into each Count below.

164. Each type of violation alleged in Counts I through IV occurred more than once, and therefore was “repeated” within the meaning of 42 U.S.C. § 7604(a)(1).

165. Plaintiffs believe that additional information from U.S. Steel’s Compliance Certification Forms and other compliance reports, ACHD inspection reports, and other sources not yet publicly available will reveal additional violations under each count listed below, and will reveal additional information about the violations described under each count listed below.

**COUNT I: Failure to Operate Pollution Control Equipment**

166. The Clairton Permit contains eight separate conditions requiring U.S. Steel to operate and maintain certain air pollution control devices at all times when its coke oven batteries are in operation. On each day from December 24, 2018, until at least April 4, 2019, U.S. Steel violated each of these eight permit conditions.

167. The Clairton Permit sets forth “Emission Unit Level Conditions” that govern the operation of specified units within the Clairton Works. Emission Unit Level Condition V.A contains emission standards and limitations applicable to Coke Oven Batteries 1, 2, and 3; Condition V.C is applicable to Batteries 13, 14, and 15; Condition V.E is applicable to Batteries 19 and 20; and Condition V.G is applicable to Battery B.

168. Conditions V.A(1)(g), V.C(1)(f), V.E(1)(g), and V.G.1(f) of the Clairton Permit each provide in relevant part: “At all times including periods of startup, shutdown, and malfunction, the permittee shall operate and maintain the coke oven batteries and the pollution

control equipment required under 40 CFR Part 63, Subpart L, in a manner consistent with good air pollution control practices for minimizing emissions to the levels required by any applicable performance standards under Subpart L.” Clairton Permit at 47, 78, 109, and 141.

169. 40 CFR Part 63, Subpart L requires coke oven operators to install and maintain Control Devices to limit emissions from coke oven batteries.

170. A “Control Device” is “any combustion device, recovery device, recapture device, or any combination of these devices.... Such equipment or devices include, but are not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters.” 40 CFR § 63.1020.

171. The Desulfurization Plant and its component units, the Light Oils Recovery facility, and the Vacuum Carbonate Unit, are all Control Devices under this definition.

172. On each day from Dec. 24, 2018, until at least April 4, 2019, U.S. Steel operated coke oven batteries while Control Devices were not in operation. On each of these days, U.S. Steel thus violated Clairton Permit conditions V.A(1)(g), V.C(1)(f), V.E(1)(g), and V.G.1(f).

173. Condition V.K contains emission standards and limitations applicable to the Desulfurization Plant.

174. Condition V.K(1)(a) requires that Clairton Works properly maintain and operate its SCOT Plant incinerator according to good engineering and air pollution control practices at all times. Clairton Permit at 181.

175. On each day from Dec. 24, 2018, until at least April 4, 2019, U.S. Steel failed to operate its SCOT Plant incinerator, thus violating Clairton Permit condition V.K(1)(a).

176. Condition V.K(1)(c)(1) and (2) require that Clairton Works “at all times ... [o]perate one Claus Plant when coke oven gas is being produced,” and that each Claus Plant “be



capable of independently processing all of the coke oven gas produced by the coke plant at full production.” Clairton Permit at 181.

177. On each day from Dec. 24, 2018, until at least April 4, 2019, U.S. Steel failed to operate either of its Claus Plants, thus violating Clairton Permit condition V.K(1)(c)(2).

178. Condition V.K(1)(d) of the Clairton Permit requires that Clairton Works operate and maintain a hydrogen cyanide (“HCN”) Destruct Unit “at all times that coke oven gas is being produced” and “[h]ave two catalytic reactors in the HCN Destruct Unit, each of which is capable of independently processing all of the feed gas to the HCN Destruct Unit when the coke plant is operating at full production.” Clairton Permit at 181.

179. On each day from Dec. 24, 2018, until at least April 4, 2019, U.S. Steel failed to operate the HCN Destruct Unit, thus violating Clairton Permit condition V.K(1)(d).

180. Condition V.K(1)(e) requires that Clairton Works, at all times while producing COG, “[o]perate and maintain a Vacuum Carbonate Unit” and “[o]perate one absorber column and one Axi compressor....” This Condition further requires that each absorber column shall be “capable of independently processing all of the gas flow through the Vacuum Carbonate Unit when the coke plant is operating at full production,” and each Axi compressor shall be “capable of independently processing all of the acid gases generated at the Vacuum Carbonate Unit when the coke plant is operating at full production.” Clairton Permit at 181-82.

181. On each day from Dec. 24, 2018, until at least April 4, 2019, U.S. Steel failed to operate the Vacuum Carbonate Unit and failed to operate an Axi compressor, thus violating Clairton Permit condition V.K(1)(e).

182. U.S. Steel reported its repeated failures to operate the Desulfurization Plant, the Vacuum Carbonate Unit, and the Light Oils Recovery facility to ACHD pursuant to breakdown

reporting procedures set forth in Clairton Permit General Condition III.15(b). Clairton Permit at 26-27.

183. On each day U.S. Steel violated the Title V permit conditions described in paragraphs 166-81, U.S. Steel violated the CAA.

184. On each day U.S. Steel violated the Title V permit conditions described in paragraphs 166-81, U.S. Steel violated the Pennsylvania SIP.

185. Because the basic design of the Clairton Works and its pollution control units have not been changed following the Fire, and because at least one other serious fire has occurred recently in the pollution control unit area, the violations described in Count I are likely to recur after the filing of this Complaint.

**COUNT II: Creation of “Air Pollution”**

186. General Condition III.1 of each of the Permits, entitled “Prohibition of Air Pollution,” provides:

The permittee shall not willfully, negligently, or through the failure to provide and operate necessary control equipment or to take necessary precautions, operate any source of air contaminants in such manner that emissions from such source:

- a. Exceed the amounts permitted by this permit or by any order or permit issued pursuant to Article XXI;
- b. Cause an exceedance of the ambient air quality standards established by Article XXI §2101.10; or
- c. May reasonably be anticipated to endanger the public health, safety, or welfare.

Clairton Permit at 23; Irvin Permit at 19; Edgar Thompson Permit at 15.

187. Every day from December 24, 2018, until at least April 4, 2019, U.S. Steel continued to produce COG at Clairton Works without operating its Desulfurization Plant and other air pollution control devices, and to combust the Raw COG at the three Plants.

188. U.S. Steel's publicly available mitigation plans show that, on each day from December 24, 2018, until at least April 4, 2019, U.S. Steel combusted COG as fuel at Clairton Works that had not been processed by the Desulfurization Plant.

189. U.S. Steel's publicly available mitigation plans show that, on each day from December 24, 2018, until at least April 4, 2019, U.S. Steel combusted COG as fuel at the Irvin Plant that had not been processed by the Desulfurization Plant at Clairton Works, and flared unprocessed COG at the Irvin Plant.

190. U.S. Steel's publicly available mitigation plans show that, on each day from December 24, 2018, until at least April 4, 2019, U.S. Steel combusted COG as fuel at the Edgar Thompson Plant that had not been processed by the Desulfurization Plant at Clairton Works.

191. On Jan. 9, 2019, ACHD issued a public warning to residents of the following 22 communities in the vicinity of the Plants: Braddock, Clairton, Dravosburg, Duquesne, East McKeesport, East Pittsburgh, Elizabeth Borough, Elizabeth Township, Forward, Glassport, Jefferson Hills, Liberty, Lincoln, McKeesport, North Braddock, North Versailles, Pleasant Hills, Port Vue, Versailles, Wall, West Elizabeth and West Mifflin.

192. ACHD's January 9, 2019, public warning stated, in part: "Mon Valley residents, particularly those with existing respiratory and/or cardiovascular conditions, children and the elderly, are being encouraged to limit outdoor activities until further notice. ... High concentrations of sulfur dioxide can affect breathing and may aggravate existing respiratory and cardiovascular disease. Sensitive populations include those with asthma, individuals with bronchitis or emphysema, children, and the elderly. Although it is unknown whether any additional exceedances will occur, ACHD is recommending that Mon-Valley residents limit their

outdoor activities, particularly if they are, or may be sensitive to, SO<sub>2</sub> particles, while repairs are being made.”

193. As listed in the subparagraphs below, during the weeks following the damage to the Clairton Works pollution control equipment by the Fire, ACHD repeatedly warned Mon Valley residents of poor air quality and issued health advisories with the following substance on the following dates:

COMPLAINT PARAGRAPH NUMBER	DATE WARNING ISSUED	DATE(S) TO WHICH WARNING APPLIES	SUBSTANCE OF WARNING
193a	1/16/19	All dates until repairs at Clairton Works are completed	“We are continuing to encourage Mon Valley residents to be aware of [the] risk [of future exceedances], especially sensitive populations, those with asthma, individuals with bronchitis or emphysema, children, and the elderly. SO <sub>2</sub> is a respiratory irritant which can make these conditions worse. We urge residents with these vulnerabilities to protect themselves by limiting their outdoor activities until repair is completed...”
193b	1/16/19	1/17/19	Warning of a “poor air dispersion day” and that “residents, particularly those with existing respiratory conditions may need to limit their outdoor activities.”
193c	1/18/19	1/19/19	Warning of a “poor air dispersion day” and that “residents, particularly those with existing respiratory conditions may need to limit their outdoor activities.”
193d	1/21/19	1/22/19	Warning of a “poor air dispersion day” and that “residents, particularly those with existing respiratory conditions may need to limit their outdoor activities.”
193e	1/22/19	1/23/19	Warning of a “poor air dispersion day” and that “residents, particularly those with existing respiratory conditions may need to limit their outdoor activities.”
193f	1/30/19	All dates until repairs are completed	“[R]esidents, especially sensitive populations, should continue to be aware of the potential for SO <sub>2</sub> exceedances until

			repairs at US Steel's Clairton Coke Works are complete."
193g	1/31/19	2/1/19	Warning of a "poor air dispersion day" and that "residents, particularly those with existing respiratory conditions may need to limit their outdoor activities."
193h	2/1/19	2/2/19	Warning of a "poor air dispersion day" and that "residents, particularly those with existing respiratory conditions may need to limit their outdoor activities."
193i	2/2/19	2/3/19	Warning of a "poor air dispersion day" and that "residents, particularly those with existing respiratory conditions may need to limit their outdoor activities."
193j	2/4/19	2/5/19	Warning of "poor air dispersion" that "traps pollutants close to the surface" and directing residents to information on "potential impact on health and how you can protect yourself...."
193k	2/5/19	2/6/19	Warning of "poor air dispersion" that "traps pollutants close to the surface" and directing residents to information on "potential impact on health and how you can protect yourself...."
193l	2/6/19	2/7/19	Warning of "poor air dispersion" that "traps pollutants close to the surface" and directing residents to information on "potential impact on health and how you can protect yourself...."
193m	2/9/19	2/10/19	Warning of "poor air dispersion" that "traps pollutants close to the surface" and directing residents to information on "potential impact on health and how you can protect yourself...."
193n	2/10/19	2/11/19	Warning of "poor air dispersion" that "traps pollutants close to the surface" and directing residents to information on "potential impact on health and how you can protect yourself...."
193o	2/11/19	2/12/19	Warning of "poor air dispersion" that "traps pollutants close to the surface" and directing residents to information on "potential impact on health and how you can protect yourself...."
193p	2/16/19	2/17/19	Warning of a "poor air dispersion day" and that "residents, particularly those with

			existing respiratory conditions may need to limit their outdoor activities.”
193q	2/19/19	2/19/19-2/20/19	Warning of “poor air dispersion” that “traps pollutants close to the surface” and “can affect . . . those with respiratory conditions.”
193r	2/21/19	2/22/19	Warning of “poor air dispersion” that “traps pollutants close to the surface” and “can affect . . . those with respiratory conditions.”
193s	2/22/19	2/23/19	Warning of “poor air dispersion” that “traps pollutants close to the surface” and “can affect . . . those with respiratory conditions.”
193t	2/27/19	2/28/19	Warning of “poor air dispersion” that “traps pollutants close to the surface” and “can affect . . . those with respiratory conditions.”
193u	2/28/19	3/1/19	Warning of “poor air dispersion” that “traps pollutants close to the surface” and “can affect . . . those with respiratory conditions.”
193v	3/2/19	3/3/19	Warning of “poor air dispersion” that “traps pollutants close to the surface” and “can affect . . . those with respiratory conditions.”
193w	3/7/19	3/8/19	Warning of “poor air dispersion” that “traps pollutants close to the surface” and “can affect . . . those with respiratory conditions.”
193x	3/1/19	3/12/19	Warning of “poor air dispersion” that “traps pollutants close to the surface” and “can affect . . . those with respiratory conditions.”
193y	3/21/19	3/21/19	Warning of “poor air dispersion” that “traps pollutants close to the surface” and “can affect . . . those with respiratory conditions.”

194. ACHD gathers air quality data from a network of air monitoring stations.

195. The Liberty air monitor is located approximately two miles from Clairton Works.

The Liberty monitor measures, among other things, the concentrations of SO<sub>2</sub> and PM in the local air each hour.

196. The North Braddock air monitor is the nearest monitor to the Edgar Thompson Plant. The North Braddock monitor measures, among other things, the concentration of SO<sub>2</sub> in the local air each hour.

197. Exceedances of the one-hour NAAQS for SO<sub>2</sub> occurred on the following dates at the Liberty monitor: Dec. 26, 2018 (two one-hour exceedances); Dec. 28, 2018; Jan. 2 and 3, 2019; Jan. 8, 2019 (two one-hour exceedances); and March 28, 2019.

198. Exceedances of the one-hour NAAQS for SO<sub>2</sub> occurred on the following dates at the North Braddock air monitor: Jan. 7 and Feb. 4, 2019.

199. Exceedances of the 24-hour NAAQS for PM 2.5 occurred on the following dates at the Liberty air monitor: Feb. 2, 3, and 4, 2019; March 24, 2019.

200. In its January 7, 2019, Mitigation Plan, U.S. Steel wrote: “We are currently flaring as much coke oven gas as possible, given current system demands at the peach tree and Irvin ground flares - and making this gas up with purchased natural gas.” Mitigation Plan (Jan. 7, 2019) at 5, ¶ 2.

201. In the Mon Valley Data, U.S. Steel reported to ACHD that its Irvin COG flares emitted 13,474.5 pounds of SO<sub>2</sub> on December 24, 2018 (date of the Fire), and 33,161.5 pounds of SO<sub>2</sub> on January 7, 2019 (date of first mitigation statement). The highest SO<sub>2</sub> emissions reported from the Irvin COG flares in the Mon Valley Data was 76,626.8 pounds on March 2, 2019. Exhibit 7.

202. On each day from Dec. 24, 2018, until at least April 4, 2019, U.S. Steel violated General Condition III.1 of the Clairton Permit, the Irvin Permit, and the Edgar Thompson Permit by failing to provide and operate necessary control equipment or take necessary precautions in the operation of the three Plants, thereby (a) emitting air contaminants in amounts that exceeded the amounts permitted by each permit, (b) causing exceedances of the National Ambient Air Quality Standards (“NAAQS”) incorporated by Article XXI §2101.10, and (c) emitting air

contaminants at levels or in amounts reasonably anticipated to endanger public health, safety, or welfare.

203. On each day U.S. Steel violated each of its Title V Permits' General Condition III.1, U.S. Steel violated the CAA.

204. On each day U.S. Steel violated each of its Title V Permits' General Condition III.1, U.S. Steel violated the Pennsylvania SIP.

205. Because the basic design of the Clairton Works and its pollution control units have not been sufficiently changed following the Fire, because at least one other serious fire has occurred recently in the pollution control unit area, and because U.S. Steel has not developed and implemented a contingency plan sufficient to prevent the combustion of Raw COG as fuel or in flares at the Plants should Clairton Works' pollution controls again be rendered unavailable, the violations described in Count II are likely to recur after the filing of this Complaint.

### **COUNT III: Violations of Hydrogen Sulfide Limits**

#### **A. Violations of Clairton Works Hydrogen Sulfide Limits**

206. The Clairton Permit imposes limits on the concentration of hydrogen sulfide (H<sub>2</sub>S) in coke oven gas (COG) used or combusted at the Clairton Works.

207. Coke oven battery Conditions V.A(1)(h), V.C(1)(g), V.E(1)(h), and V.G.1(h) each provide in relevant part: "[T]he permittee shall not flare, mix, or combust coke oven gas, or allow such gas to be flared, mixed or combusted unless the concentration of sulfur compounds, measured as hydrogen sulfide, in such gas is less than or equal to 40 grains per hundred dry standard cubic feet of coke oven gas produced by Clairton Works, when all sulfur emissions from the Claus Sulfur Recovery Plant and the tail gas cleaning equipment thereon, expressed as equivalent H<sub>2</sub>S are added to the measured H<sub>2</sub>S. The concentration of sulfur compounds



specified shall include the tail-gas sulfur, measured as hydrogen sulfide, emitted from sulfur removal equipment.” Clairton Permit at 48, 78, 109-10, and 141-42.

208. Desulfurization Plant Condition V.K(1)(j) prohibits any person from flaring, mixing, or combusting COG unless the concentration of sulfur compounds in the COG is less than or equal to 10 grains per hundred dry standard cubic feet of COG from Batteries 13, 14, 15, 20, and B, and less than or equal to 40 grains per hundred dry standard cubic feet of COG from the other Permitted Batteries. Clairton Permit at 184.

209. Boiler Conditions V.AA(1)(b), V.BB(1)(b), V.CC(1)(b), and V.DD(1)(b) prohibit Clairton Works from flaring, mixing, or combusting COG in Boiler No. 1, Boiler No. 2, Boilers R1 and R2, and Boilers T1 and T2 unless the concentration of sulfur compounds in the COG is less than or equal to 40 grains per hundred dry standard cubic feet of COG. Clairton Permit at 241, 244, 247 and 250.

210. Upon information and belief, ACHD issued an installation permit to U.S. Steel for Clairton Works (the “Clairton H<sub>2</sub>S Installation Permit”), pursuant to Clairton Permit General Condition III.39, which lowered each of the 40 grain H<sub>2</sub>S limits described in paragraphs 207-09, above, to 35 grains.

211. In the Clairton Data, U.S. Steel reported to ACHD the daily H<sub>2</sub>S concentrations in the COG (measured in grains per dry standard cubic feet, or “gr/dscf”) at Clairton Works from December 24, 2018, to March 16, 2019. The reported H<sub>2</sub>S concentrations were provided for four different locations: the A-Line, the B-Line, the Unit #1 Underfire, and the Unit #2 Underfire. Exhibit 4.

212. In the Clairton Data, with the exception of the December 24, 2018, readings at Underfire Units #1 and #2 (5.2 and 6.8 gr/dscf, respectively), the H<sub>2</sub>S concentrations in the COG

at every location on every day from December 24, 2018, through March 16, 2019, were higher than 40 gr/dscf. The H<sub>2</sub>S concentrations ranged from: a low of 107 to a high of 239.5 gr/dscf at A-Line; a low of 122.1 to a high of 252.0 gr/dscf at B-Line; a low of 73.8 to a high of 167.7 gr/dscf at Unit #1 Underfire; and a low of 73.3 to a high of 325.9 gr/dscf at Unit #2 Underfire. Exhibit 4.

213. Information available to U.S. Steel, but not currently available to Plaintiffs, contains the dates, locations, and amounts of H<sub>2</sub>S concentrations in coke oven gas produced by Clairton Works for the period from March 17, 2019 to present.

214. Because U.S. Steel did not desulfurize the COG it produced at Clairton until at least April 4, 2019, Plaintiffs believe that the H<sub>2</sub>S grain loads at Clairton Works continued to exceed 40 gr/dscf from March 17, 2019 until at least April 4, 2019.

215. U.S. Steel exceeded the H<sub>2</sub>S concentration limits in Clairton Permit conditions V.A(1)(h), V.C(1)(g), V.E(1)(h), V.G.1(h), V.K(1)(j), V.AA(1)(b), V.BB(1)(b), V.CC(1)(b), and V.DD(1)(b), and in the Clairton H<sub>2</sub>S Installation Permit, each day from Dec. 24, 2018, until at least April 4, 2019.

216. Each day U.S. Steel exceeded each of the H<sub>2</sub>S concentration limits in its Clairton Permits, U.S. Steel violated the Clean Air Act.

217. Each day U.S. Steel exceeded each of the H<sub>2</sub>S concentration limits in its Clairton Permits, U.S. Steel violated the Pennsylvania SIP.

**B. Violations of Irvin Plant Hydrogen Sulfide Limits**

218. The Irvin Permit imposes limits on the concentration of hydrogen sulfide (H<sub>2</sub>S) in coke oven gas used or combusted at the Irvin Plant.

219. Irvin Permit Condition V.J(1)(a) prohibits the Irvin Plant from flaring, mixing, or combusting COG in Flares No.1 to No. 3 or the Peachtree Flare unless the concentration of sulfur compounds in the COG is less than or equal to 35 grains per hundred dry standard cubic feet. Irvin Permit at 75.

220. Irvin Permit Condition V.A(1)(d) prohibits the Irvin Plant from flaring, mixing, or combusting COG in reheat furnaces No. 1 through No. 5 unless the concentration of sulfur compounds in the COG is less than or equal to 35 grains per hundred dry standard cubic feet. Irvin Permit at 38.

221. Irvin Permit Condition V.E(1)(d) prohibits the Irvin Plant from flaring, mixing, or combusting COG in HPH furnaces No. 1 through No. 31 unless the concentration of sulfur compounds in the COG is less than or equal to 35 grains per hundred dry standard cubic feet. Irvin Permit at 59.

222. Irvin Permit Condition V.F(1)(h) prohibits the Irvin Plant from flaring, mixing, or combusting COG in Open Coil Annealing Furnaces No. 1 through No. 16 unless the concentration of sulfur compounds in the COG is less than or equal to 35 grains per hundred dry standard cubic feet. Irvin Permit at 63.

223. Irvin Permit Condition V.G(1)(f) prohibits the Irvin Plant from flaring, mixing, or combusting COG in the Continuous Annealing Furnace unless the concentration of sulfur compounds in the COG is less than or equal to 35 grains per hundred dry standard cubic feet. Irvin Permit at 67.

224. Irvin Permit Conditions V.K(1)(e), V.L(1)(e), V.M(1)(e), and V.N(1)(d) prohibit the Irvin Plant from flaring, mixing, or combusting COG in Boilers No. 1, 2, 3 or 4 unless the

concentration of sulfur compounds in the COG is less than or equal to 35 grains per hundred dry standard cubic feet. Irvin Permit at 77, 80, 83 and 86.

225. H<sub>2</sub>S concentrations in the COG used or combusted at the Irvin Plant are calculated at Clairton Works. *See, e.g.*, Irvin Permit at 39.

226. No treatment occurs at the Irvin Plant to reduce the H<sub>2</sub>S concentrations in the COG received from Clairton Works.

227. In the Irvin Data, U.S. Steel reported to ACHD the daily H<sub>2</sub>S concentrations in the COG (in gr/dscf) for the Irvin Plant from December 24, 2018, to March 16, 2019. Exhibit 5.

228. In the Irvin Data, the H<sub>2</sub>S concentrations in the COG on every day from December 24, 2018 through March 16, 2019, were higher than 35 gr/dscf. The H<sub>2</sub>S concentrations ranged from a low of 122.1 to a high of 252.0 gr/dscf. Exhibit 5.

229. Information available to U.S. Steel, but not currently available to the Plaintiffs, contains the dates, locations, and amounts of the H<sub>2</sub>S concentrations in COG burned as fuel or in flares at the Irvin Plant for the period from March 17, 2019, to present.

230. U.S. Steel's publicly available mitigation plans show that, each day from December 24, 2018, until at least April 4, 2019, U.S. Steel burned COG at the Irvin Plant that had not been processed by the Desulfurization Plant at Clairton Works.

231. Because U.S. Steel did not desulfurize the COG it produced at Clairton until at least April 4, 2019, Plaintiffs believe that H<sub>2</sub>S concentrations in the COG at the Irvin Plant continued to exceed 35 gr/dscf from March 17, 2019, until at least April 4, 2019.

232. U.S. Steel exceeded the H<sub>2</sub>S concentration limits in Irvin Permit Conditions V.J(1)(a), V.A(1)(d), V.E(1)(d), V.F(1)(h), V.G(1)(f), V.K(1)(e), V.L(1)(e), V.M(1)(e), and V.N(1)(d) each day from December 24, 2018, until at least April 4, 2019.

233. Each day U.S. Steel exceeded each of the H<sub>2</sub>S concentration limits in the Irvin Permit, U.S. Steel violated the Clean Air Act.

234. Each day U.S. Steel exceeded each of the H<sub>2</sub>S concentration limits in the Irvin Permit, U.S. Steel violated the Pennsylvania SIP.

**C. Violations of Edgar Thompson Plant Hydrogen Sulfide Limits**

235. The Edgar Thompson Permit imposes limits on the concentration of H<sub>2</sub>S in coke oven gas used or combusted at the Edgar Thompson Plant.

236. Edgar Thomson Permit Condition V.B(1)(c) prohibits the Edgar Thomson Plant from flaring, mixing, or combusting COG in Blast Furnaces No. 1 Stoves or Blast Furnace No. 3 Stoves unless the concentration of sulfur compounds in the COG is less than or equal to 35 grains per hundred dry standard cubic feet. Edgar Thompson Permit at 51.

237. Edgar Thomson Permit Condition V.F(1)(a) prohibits the Edgar Thomson Plant from flaring, mixing, or combusting COG in the Dual Strand Continuous Caster shop unless the concentration of sulfur compounds in the COG is less than or equal to 35 grains per hundred dry standard cubic feet. Edgar Thompson Permit at 88.

238. Edgar Thomson Permit Condition V.H(1)(e) prohibits the Edgar Thomson Plant from flaring, mixing, or combusting COG in Riley Boilers No. 1, 2, or 3 unless the concentration of sulfur compounds in the COG is less than or equal to 35 grains per hundred dry standard cubic feet. Edgar Thompson Permit at 95.

239. H<sub>2</sub>S concentrations in the COG used or combusted at the Edgar Thompson Plant are calculated at Clairton Works. *See, e.g.*, Edgar Thompson Permit at 41.

240. No treatment occurs at the Edgar Thompson Plant to reduce the H<sub>2</sub>S concentrations in the COG received from Clairton Works.

241. In the Edgar Thompson Data, U.S. Steel reported to ACHD the daily H<sub>2</sub>S concentrations in the COG (in gr/dscf) for the Edgar Thompson Plant from December 24, 2018, to March 16, 2019. The reported H<sub>2</sub>S concentrations were provided for two different locations: the A-Line and the B-Line. Exhibit 6.

242. In the Edgar Thompson Data, the H<sub>2</sub>S concentrations in the COG at both locations and on every day from December 24, 2018 through March 16, 2019, were higher than 35 gr/dscf. The H<sub>2</sub>S concentrations ranged from: a low of 107 to a high of 239.5 gr/dscf at A-Line; and a low of 122.1 to a high of 252.0 gr/dscf at B-Line. Exhibit 6.

243. Information available to U.S. Steel, but not currently available to the Plaintiffs, contains the dates, locations, and amounts of the H<sub>2</sub>S concentrations in COG burned as fuel at the Edgar Thompson Plant for the period from March 17, 2019 to present.

244. U.S. Steel's publicly available mitigation plans show that, each day from Dec. 24, 2018, until at least April 4, 2019, U.S. Steel used COG as fuel at the Edgar Thompson Plant that had not been processed by the Desulfurization Plant at Clairton Works.

245. Because U.S. Steel did not desulfurize the COG it produced at Clairton Works until at least April 4, 2019, Plaintiffs believe that the H<sub>2</sub>S concentrations in the COG used or combusted at the Edgar Thompson Plant continued to exceed 35 gr/dscf from March 17, 2019, until at least April 4, 2019.

246. U.S. Steel exceeded the H<sub>2</sub>S concentration limits in Edgar Thompson Permit Conditions V.B(1)(c), V.F(1)(a), and V.H(1)(e), each day from December 24, 2018, until at least April 4, 2019.

247. Each day U.S. Steel exceeded each of the H<sub>2</sub>S concentration limits in the Edgar Thompson Permit, U.S. Steel violated the Clean Air Act.

248. Each day U.S. Steel exceeded each of the H<sub>2</sub>S concentration limits in the Edgar Thompson Permit, U.S. Steel violated the Pennsylvania SIP.

249. Because publicly available information reported by U.S. Steel shows that H<sub>2</sub>S concentration limits for the COG at Clairton Works, at the Irvin Plant, and at the Edgar Thompson Plant were also exceeded before the Fire, including on August 11-12 and September 10, 2017, and July 1 through August 2, 2018, the violations described in Count III are likely to recur after the filing of this Complaint. Edgar Thompson Semi-annual Report, July 1 through December 31, 2017 at 10; Irvin Plant Semiannual Report, July 1, 2018 – December 30, 2018.

250. Because the basic design of the Clairton Works and its pollution control units have not been sufficiently changed following the Fire, because at least one other serious fire has occurred recently in the pollution control unit area, and because U.S. Steel has not developed and implemented a contingency plan sufficient to prevent the combustion of Raw COG as fuel at the Plants should Clairton Works' pollution controls again be rendered unavailable, the violations described in Count III are likely to recur after the filing of this Complaint.

#### **COUNT IV: Violations of Sulfur Dioxide Limits**

251. U.S. Steel determines the amount of its SO<sub>2</sub> emissions by using a formula that relies on the daily volume of gas combusted at each SO<sub>2</sub> emission unit and the H<sub>2</sub>S concentrations in that gas, among other inputs. *See* Exhibit 7.

##### **A. Violations of Clairton Works Sulfur Dioxide Limits**

252. The Clairton Permit imposes limits on the rate and amount of sulfur dioxide (SO<sub>2</sub>) emissions from Clairton Works.

253. In the Clairton Data, U.S. Steel reported to ACHD the daily SO<sub>2</sub> emissions (in pounds per day) from each of the permitted SO<sub>2</sub> emission sources at Clairton Works from

December 24, 2018, to March 16, 2019. Exhibit 4. Dividing each daily SO<sub>2</sub> emission total in the Clairton Data by 24 generates a pounds per hour emission rate for each source for each day.

254. Information available to U.S. Steel, but not currently available to Plaintiffs, contains the dates, locations, and emission rates of SO<sub>2</sub> emitted by Clairton Works from March 17, 2019, to present.

**1. Batteries 1, 2, and 3 SO<sub>2</sub> Limits**

255. Clairton Permit Condition V.A(1)(v) sets an SO<sub>2</sub> limit of 31.8 pounds per hour for each combustion stack of Batteries 1, 2, and 3. Clairton Permit at 49.

256. Clairton Installation Permit Condition V.A(1)(b) sets rolling 30-day SO<sub>2</sub> limits of 10.41 pounds per hour for Battery 1 Underfiring, 9.15 pounds per hour for Battery 2 Underfiring, and 10.57 pounds per hour for Battery 3 Underfiring. Clairton Installation Permit at 19.

257. Clairton Installation Permit Condition V.A(1)(b) sets supplementary 24-hour SO<sub>2</sub> limits, which are not to be exceeded more than three times consecutively, of 13.27 pounds per hour for Battery 1 Underfiring, 11.66 pounds per hour for Battery 2 Underfiring, and 13.47 pounds per hour for Battery 3 Underfiring. Clairton Installation Permit at 19.

258. The Clairton Data show that SO<sub>2</sub> emissions exceeded the pounds per hour limits in Clairton Permit Condition V.A(1)(v) for Batteries 1, 2, and 3 each day from December 24, 2018 until March 16, 2019.

259. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the supplementary 24-hour SO<sub>2</sub> pounds per hour limits in the Clairton Installation Permit Condition V.A(1)(b) for Batteries 1, 2, and 3 each day from December 24, 2018, until March 16, 2019.



260. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the 30-day SO<sub>2</sub> emission limits in the Clairton Installation Permit Condition V.A(1)(b) for Batteries 1, 2, and 3 each day from at least January 7, 2019 until March 16, 2019. Exhibit 4.

261. Upon information and belief, SO<sub>2</sub> emissions continued to exceed Clairton Permit Condition V.A(1)(v) and Clairton Installation Permit Condition V.A(1)(b) at Batteries 1, 2, and 3 each day from March 16, 2019, until at least April 4, 2019.

## **2. Batteries 13, 14, and 15 SO<sub>2</sub> Limits**

262. Clairton Permit Condition V.C(1)(v) sets an SO<sub>2</sub> limit of 33.5 pounds per hour for each combustion stack of Batteries 13, 14, and 15. Clairton Permit at 80.

263. Clairton Installation Permit Condition V.A(1)(b) sets rolling 30-day SO<sub>2</sub> limits of 13.93 pounds per hour for Battery 13 Underfiring, 14.03 pounds per hour for Battery 14 Underfiring, and 18.67 pounds per hour for Battery 15 Underfiring. Clairton Installation Permit at 19.

264. Clairton Installation Permit Condition V.A(1)(b) sets supplementary 24-hour SO<sub>2</sub> limits, which are not to be exceeded more than three times consecutively, of 15.70 pounds per hour for Battery 13 Underfiring, 15.80 pounds per hour for Battery 14 Underfiring, and 21.04 pounds per hour for Battery 15 Underfiring. Clairton Installation Permit at 19.

265. The Clairton Data show that SO<sub>2</sub> emissions exceeded the pounds per hour limits in Clairton Permit Condition V.C(1)(v) for Batteries 13, 14, and 15 each day from December 24, 2018, until March 16, 2019.

266. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the supplementary 24-hour SO<sub>2</sub> pounds per hour limits in the Clairton Installation Permit Condition V.A(1)(b) for Batteries 13, 14, and 15 each day from December 24, 2018, until March 16, 2019.

267. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the 30-day SO<sub>2</sub> emission limits in the Clairton Installation Permit Condition V.A(1)(b) for Batteries 13, 14, and 15 each day from at least January 7, 2019, until March 16, 2019. Exhibit 4.

268. Upon information and belief, SO<sub>2</sub> emissions continued to exceed Clairton Permit Condition V.C(1)(v) and Clairton Installation Permit Condition V.A(1)(b) at Batteries 13, 14 and 15 each day from March 16, 2019 until at least April 4, 2019.

### **3. Battery 19 SO<sub>2</sub> Limits**

269. Clairton Permit Condition V.E(1)(bb) sets an SO<sub>2</sub> limit of 61.53 pounds per hour for the Battery 19 combustion stack. Clairton Permit at 112.

270. Clairton Installation Permit Condition V.A(1)(b) sets a rolling 30-day SO<sub>2</sub> limit of 29.37 pounds per hour for Battery 19 Underfiring. Clairton Installation Permit at 19.

271. Clairton Installation Permit Condition V.A(1)(b) sets a supplementary 24-hour SO<sub>2</sub> limit, which is not to be exceeded more than three times consecutively, of 33.09 pounds per hour for Battery 19 Underfiring. Clairton Installation Permit at 19.

272. The Clairton Data show that SO<sub>2</sub> emissions exceeded the pounds per hour limit in Clairton Permit Condition V.E(1)(bb) from Battery 19 each day from December 24, 2018 until March 16, 2019.

273. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the supplementary 24-hour SO<sub>2</sub> pounds per hour limit in the Clairton Installation Permit Condition V.A(1)(b) from Battery 19 each day from December 24, 2018 until March 16, 2019. Exhibit 4.

274. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the 30-day SO<sub>2</sub> emission limit in the Clairton Installation Permit Condition V.A(1)(b) from Battery 19 each day from at least January 7, 2019, until March 16, 2019. Exhibit 4.

275. Upon information and belief, SO<sub>2</sub> emissions continued to exceed Clairton Permit Condition V.E(1)(bb) and Clairton Installation Permit Condition V.A(1)(b) at Battery 19 each day from March 16, 2019 until at least April 4, 2019.

#### **4. Battery 20 SO<sub>2</sub> Limits**

276. Clairton Permit Condition V.E(1)(cc) sets an SO<sub>2</sub> limit of 61.5 pounds per hour for the Battery 20 combustion stack. Clairton Permit at 112.

277. Clairton Installation Permit Condition V.A(1)(b) sets a rolling 30-day SO<sub>2</sub> limit of 27.00 pounds per hour for Battery 20 Underfiring. Clairton Installation Permit at 19.

278. Clairton Installation Permit Condition V.A(1)(b) sets a supplementary 24-hour SO<sub>2</sub> limit, which is not to be exceeded more than three times consecutively, of 27.00 pounds per hour for Battery 20 Underfiring. Clairton Installation Permit at 19.

279. The Clairton Data show that SO<sub>2</sub> emissions exceeded the pounds per hour limit in Clairton Permit Condition V.E(1)(cc) from Battery 20 each day from December 24, 2018, until March 16, 2019.

280. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the supplementary 24-hour SO<sub>2</sub> pounds per hour limit in the Clairton Installation Permit Condition V.A(1)(b) from Battery 20 each day from December 24, 2018 until March 16, 2019. Exhibit 4.

281. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the 30-day SO<sub>2</sub> emission limit in the Clairton Installation Permit Condition V.A(1)(b) from Battery 20 each day from at least January 7, 2019, until March 16, 2019. Exhibit 4.

282. Upon information and belief, SO<sub>2</sub> emissions continued to exceed Clairton Permit Condition V.E(1)(cc) and Clairton Installation Permit Condition V.A(1)(b) at Battery 20 each day from March 16, 2019, until at least April 4, 2019.

## **5. Battery B SO<sub>2</sub> Limits**

283. Clairton Permit Condition V.G(1)(v) sets an SO<sub>2</sub> limit of 91.5 pounds per hour for the Battery B combustion stack. Clairton Permit at 143.

284. Clairton Installation Permit Condition V.A(1)(b) sets a rolling 30-day SO<sub>2</sub> limit of 21.38 pounds per hour for Battery B Underfiring. Clairton Installation Permit at 19.

285. Clairton Installation Permit Condition V.A(1)(b) sets a supplementary 24-hour SO<sub>2</sub> limit of 27.26 pounds per hour for Battery B Underfiring. Clairton Installation Permit at 19.

286. The Clairton Data show that SO<sub>2</sub> emissions exceeded the pounds per hour limit in Clairton Permit Condition V.G(1)(v) from Battery B each day from December 24, 2018 until March 16, 2019.

287. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the supplementary 24-hour SO<sub>2</sub> pounds per hour limit in the Clairton Installation Permit Condition V.A(1)(b) from Battery B each day from December 24, 2018, until March 16, 2019. Exhibit 4.

288. The Clairton Data also show that SO<sub>2</sub> emissions exceeded the 30-day SO<sub>2</sub> emission limit in the Clairton Installation Permit Condition V.A(1)(b) from Battery B each day from at least January 7, 2019, until March 16, 2019.

289. Upon information and belief, SO<sub>2</sub> emissions continued to exceed Clairton Permit Condition V.G(1)(v) and Clairton Installation Permit Condition V.A(1)(b) at Battery B each day from March 16, 2019, until at least April 4, 2019.

290. Each day U.S. Steel exceeded each of the SO<sub>2</sub> emission limits in its Clairton Permits, U.S. Steel violated the Clean Air Act.

291. Each day U.S. Steel exceeded each of the SO<sub>2</sub> emission limits in its Clairton Permits, U.S. Steel violated the Pennsylvania SIP.

**B. Violations of Irvin Plant Sulfur Dioxide Limits**

292. The Irvin Permit imposes limits on the rate and amount of sulfur dioxide (SO<sub>2</sub>) emissions from the Irvin Plant.

293. In the Irvin Data, U.S. Steel reported to ACHD the daily SO<sub>2</sub> emissions (in pounds per day) from each of the permitted SO<sub>2</sub> emission sources at the Irvin Plant from December 24, 2018, to March 16, 2019. Exhibit 5. Dividing each daily SO<sub>2</sub> emission total in the Irvin Data by 24 generates a pounds per hour emission rate for each source for each day.

294. Information available to U.S. Steel, but not currently available to Plaintiffs, contains the dates, locations, and emission rates of SO<sub>2</sub> emitted by the Irvin Plant from March 17, 2019, to present.

**1. Hot Strip Mill Reheat Furnaces SO<sub>2</sub> Limits**

295. Irvin Permit Condition V.A(1)(f) sets an SO<sub>2</sub> limit of 30.12 pounds per hour for each Hot Strip Mill Reheat Furnace. Irvin Permit at 38.

296. Irvin Installation Permit Condition V.A(1)(b) sets an aggregated rolling 30-day SO<sub>2</sub> limit of 108.63 pounds per hour for all Hot Strip Mill Reheat Furnaces together. Irvin Installation Permit at 19.

297. Irvin Installation Permit Condition V.A(1)(b) sets an aggregated supplementary 24-hour SO<sub>2</sub> limit, which is not to be exceeded more than three times consecutively, of 118.75 pounds per hour for all Hot Strip Mill Reheat Furnaces together. Irvin Installation Permit at 19.

298. The Irvin Data show that SO<sub>2</sub> emissions exceeded the pounds per hour limits in Irvin Permit Condition V.A(1)(f) from each Hot Strip Mill Reheat Furnace on the following days: Dec. 25-31, 2018; Jan. 2-6, Feb. 1, 6, 7, 9, 16, 22, 27 and 28, 2019.

299. The Irvin Data also show SO<sub>2</sub> emissions exceeded the supplementary 24-hour SO<sub>2</sub> pounds per hour limit in Irvin Installation Permit Condition V.A(1)(b) from all Hot Strip Mill Reheat Furnaces on the following days: Dec. 25-31, 2018; Jan. 2-6, 9-12, 16-19, and 24-28, Jan 31-Feb. 2, Feb. 5-9, 13-17, 20-23, 2019.

300. The Irvin Data also show that SO<sub>2</sub> emissions exceeded the 30-day SO<sub>2</sub> emission limit in Irvin Installation Permit Condition V.A(1)(b) from all Hot Strip Mill Reheat Furnaces on each day from January 5 through March 8, 2019. Exhibit 5.

301. Upon information and belief, SO<sub>2</sub> emissions continued to exceed Irvin Permit Condition V.A(1)(f) and Irvin Installation Permit Condition V.A(1)(b) at the Hot Strip Mill Reheat Furnaces on multiple days from March 16 until at least April 4, 2019.

## **2. Boiler No. 1 SO<sub>2</sub> Limits**

302. Irvin Permit Condition V.K(1)(f) sets an SO<sub>2</sub> limit of 17.17 pounds per hour for Boiler No. 1. Irvin Permit at 78.

303. Irvin Installation Permit Condition V.A(1)(b) sets a rolling 30-day SO<sub>2</sub> limit of 7.88 pounds per hour for Boiler No. 1. Irvin Installation Permit at 19.

304. Irvin Installation Permit Condition V.A(1)(b) sets a supplementary 24-hour SO<sub>2</sub> limit, which is not to be exceeded more than three times consecutively, of 8.92 pounds per hour for Boiler No. 1. Irvin Installation Permit at 19.

305. The Irvin Data show that SO<sub>2</sub> emissions exceeded the pounds per hour limit in Irvin Permit Condition V.K(1)(f) from Boiler 1 on the following days: Dec. 27 and 28, 2018; Jan. 10, Feb. 27, and 28, 2019.

306. The Irvin Data also show that SO<sub>2</sub> emissions exceeded the supplementary 24-hour SO<sub>2</sub> pounds per hour limit in Irvin Installation Permit Condition V.A(1)(b) from Boiler 1 on the following days: Dec. 27-29, 2018; Jan. 2-4, Feb. 5-9, 19-23, and Feb. 25- Mar. 1, 2019.

307. The Irvin Data also show that SO<sub>2</sub> emissions exceeded the 30-day SO<sub>2</sub> emission limit in the Irvin Installation Permit Condition V.A(1)(b) from Boiler 1 on the following days: Jan. 5-17, 24, 25, Feb 15, and Feb. 18-Mar. 16, 2019.

308. Upon information and belief, SO<sub>2</sub> emissions continued to exceed Irvin Permit Condition V.K(1)(f) and Irvin Installation Permit Condition V.A(1)(b) at Boiler 1 on multiple days from March 16, 2019, until at least April 4, 2019.

### **3. Boiler No. 2 SO<sub>2</sub> Limits**

309. Irvin Permit Emission Unit Level Condition V.L(1)(f) sets an SO<sub>2</sub> limit of 18.20 pounds per hour and 45.90 tons Boiler No. 2. Irvin Permit at 81.

310. Irvin Installation Permit Condition V.A(1)(b) sets a rolling 30-day SO<sub>2</sub> limit of 8.36 pounds per hour for Boiler No. 2. Irvin Installation Permit at 19.

311. Irvin Installation Permit Condition V.A(1)(b) sets a supplementary 24-hour SO<sub>2</sub> limit, which is not to be exceeded more than three times consecutively, of 9.46 pounds per hour for Boiler No. 2. Irvin Installation Permit at 19.

312. The Irvin Data show that SO<sub>2</sub> emissions exceeded the pounds per hour limit in Irvin Permit Condition V.L(1)(f) from Boiler 2 on Jan 10, 2019.

313. The Irvin Data also show that SO<sub>2</sub> emissions exceeded the supplementary 24-hour SO<sub>2</sub> pounds per hour limit in Irvin Installation Permit Condition V.A(1)(b) from Boiler 2 on each day from December 26 to 30, 2018.

314. The Irvin Data also show that SO<sub>2</sub> emissions exceeded the 30-day SO<sub>2</sub> emission limit in Irvin Installation Permit Condition V.A(1)(b) from Boiler 2 on each day from January 5 to 14, 2019.

315. Upon information and belief, SO<sub>2</sub> emissions continued to exceed Irvin Permit Condition V.L(1)(f) and Irvin Installation Permit Condition V.A(1)(b) at Boiler 2 on multiple days from March 16, 2019 until at least April 4, 2019.

316. Each day U.S. Steel exceeded each of the SO<sub>2</sub> emission limits in its Irvin Permits, U.S. Steel violated the Clean Air Act.

317. Each day U.S. Steel exceeded each of the SO<sub>2</sub> emission limits in its Irvin Permits, U.S. Steel violated the Pennsylvania SIP.

318. Because publicly available information reported by U.S. Steel shows that H<sub>2</sub>S concentration limits for the COG at Clairton Works, at the Irvin Plant, and at the Edgar Thompson Plant were also exceeded before the Fire, including on August 11-12 and September 10, 2017, and July 1 through August 2, 2018, the violations described in Count IV are likely to recur after the filing of this Complaint. Edgar Thompson Semi-annual Report, July 1 through December 31, 2017 at 10; Irvin Plant Semiannual Report, July 1, 2018 – December 30, 2018.

319. Because the basic design of the Clairton Works and its pollution control units have not been sufficiently changed following the Fire, because at least one other serious fire has occurred recently in the pollution control unit area, and because U.S. Steel has not developed and implemented a contingency plan sufficient to prevent the combustion of Raw COG as fuel at the Plants should Clairton Works' pollution controls again be rendered unavailable, the violations described in Count III are likely to recur after the filing of this Complaint.



**PLAINTIFFS AND THEIR MEMBERS ARE HARMED  
BY DEFENDANT'S CLEAN AIR ACT VIOLATIONS**

320. Members of the Plaintiff groups live near, rent or own property near, and spend time shopping, recreating, and conducting other activities near the Plants.

321. Some of Plaintiffs' members live within as little as one-half mile of one of the Plants. Other members live within one to three miles of one or more of the Plants.

322. Members of the Plaintiff groups reside in the towns of Clairton, Glassport, North Braddock, and East Pittsburgh, Pennsylvania.

323. Plaintiffs have members who breathe illegal emissions from the Plants.

324. Plaintiffs have members who can see air pollution coming from the Plants.

325. Plaintiffs' members notice and are bothered by noxious odors emitted from the Plants, including "rotten egg" odors, sulfur smells, and "burnt-match" smells.

326. Plaintiffs' members who live near and spend time near the Plants experience difficulty breathing, exacerbated asthma, and other respiratory symptoms that they attribute to emissions from the Plants.

327. Plaintiffs' members who live near and spend time near the Plants experience headaches.

328. Plaintiffs' members who live near and spend time near the Plants experience fatigue.

329. From time to time, airborne soot from the Plants is deposited on the property of some of Plaintiffs' members. The soot settles on their homes, is aesthetically displeasing, is difficult to clean, and may corrode metal and other surfaces. Plaintiffs' members have a reasonable fear that it is unhealthy for them to contact or to breathe the soot from the Plants.

330. Plaintiffs' members are also reasonably concerned that the presence of soot from the Plants on their homes provides an indication that emissions of other, less readily visible airborne pollutants from the Plants also reach their homes.

331. Plaintiffs' members are reasonably concerned about having breathed carcinogens emitted during U.S. Steel's violations.

332. The odors and soot emitted from the Plants diminish Plaintiffs' members' enjoyment of their homes, backyards, and neighborhoods.

333. The air pollution from the Plants' violations causes Plaintiffs' members to visit or spend time outdoors in the areas surrounding the Plants less frequently than they otherwise would.

334. Plaintiffs' members believe the experiences, conditions, and symptoms described in paragraphs 323-33 are caused by the air emissions from the Plants, based on one or more of the following factors: the proximity of one or more of the Plants to their homes or to the places where they experience these impacts; the wind direction at the time they experience these impacts; visual observations of smoke, soot, or dust emissions from the Plant; the fact that the odors they experience are consistent with materials used or produced at the Plant; the absence of any other possible sources of such emissions or odors in the area; and the abatement of these conditions and symptoms when they leave Allegheny County.

335. Plaintiff's members experienced markedly increased incidence and intensity of the odors, degraded air quality, experiences, and physical and respiratory symptoms described in paragraphs 323-28 and 331-33 immediately after the Fire, and these heightened symptoms and air quality conditions persisted throughout the time that pollution controls at Clairton Works were out of commission.

336. Plaintiffs' members restricted their outdoor activities more than usual because of poor air quality following the Fire.

337. Plaintiffs have members who saw increased flaring at the Irvin Plant following the Fire.

338. Plaintiffs were aware of, took seriously, and were alarmed by ACHD's air quality warnings in the months following the Fire.

339. The pollutants the Plants emitted during the alleged violations cause the types of symptoms and conditions Plaintiffs' members have experienced.

340. Plaintiffs' members want to breathe as little air pollution from the Plants as possible, and certainly do not want to breathe illegally emitted air pollutants.

341. Plaintiffs' members are reasonably concerned that the air pollution unlawfully released from the Plants during the violations described in this Complaint has harmed, and continues to harm and threaten, their health and their families' health.

342. The greater the number of exposures to hydrogen sulfide, sulfur dioxide, particulate matter, and benzene and other volatile organic compounds, and the higher the levels of those exposures, the more a person's health is compromised. Reductions in the concentrations of airborne hydrogen sulfide, sulfur dioxide, particulate matter, and benzene and other volatile organic compounds are beneficial to human health.

343. Plaintiffs' members are reasonably concerned about the ongoing effects on them and their families of inhaling a large amount of unlawful pollution from the Plants in the few months following the December 24, 2018, Fire. Plaintiffs' members want to off-set or mitigate those effects by breathing less of the Plants' pollution in the future.

344. Plaintiffs' members fear that the Plants will once again continue production without operating the necessary pollution control equipment and that they will, as a result, breathe more illegally emitted air pollutants.

345. The actual and threatened harm to Plaintiff's members would be redressed by an injunction, civil penalty, and other relief that prevents or deters future violations of emission standards and limitations, that requires US Steel to offset the pollution from these violations by reducing their pollution to below lawful levels, or that otherwise remediates harm that has already been caused to Plaintiffs' members and their local communities.

**RELIEF REQUESTED**

Plaintiffs request that this Court:

- a. Declare Defendant to have violated and to be in violation of the Clean Air Act and the Plants' Title V operating permits on each of the dates and by committing each of the violations described in Counts I through IV;
- b. Order Defendant to comply with the Clean Air Act and the Plants' Title V operating permits, and to refrain from further violations of the emission standards and limitations specified in the Plants' Title V operating permits;
- c. Order Defendant to implement measures to remedy, mitigate, or offset the harm to public health and the environment caused by the violations alleged herein;
- d. Order Defendant to develop and implement a contingency plan to prevent unauthorized combustion of COG as fuel or in flares when pollution controls are inoperable;

- e. Assess an appropriate civil penalty against Defendant of up to \$97,229 per day for each violation of the Act and applicable permits and regulations, as provided by 42 U.S.C. §§ 7413(e) and 7604(a) and (g), and 40 CFR § 19.4, Table 2;
- f. Order that \$100,000 of the civil penalty to be used in beneficial mitigation projects that are consistent with the CAA and enhance the public health and the environment in the areas adversely affected by U.S. Steel's violations of the Act;
- g. Award Plaintiffs their costs of litigation (including reasonable attorney and expert witness fees), as provided by 42 U.S.C. § 7604(d);
- h. Order such other relief as the Court deems appropriate.

Dated: April 29, 2019

PLAINTIFFS,  
PENNENVIRONMENT, INC. and CLEAN AIR  
COUNCIL

*Thomas J. Farrell / laa*

Thomas J. Farrell  
PA ID No. 48976  
Farrell, Reisinger & Comber, LLC  
300 Koppers Building  
436 Seventh Avenue  
Pittsburgh, PA 15219  
(412) 894-1380  
[tfarrell@farrellreisinger.com](mailto:tfarrell@farrellreisinger.com)

Joshua R. Kratka  
Charles C. Caldart  
Margaret M. A. Nivison  
*Pro hac vice motions to be filed*  
National Environmental Law Center  
294 Washington Street, Suite 500  
Boston, MA 02108  
(617) 747-4333  
[josh.kratka@nelconline.org](mailto:josh.kratka@nelconline.org)

David Nicholas  
*Pro hac vice motion to be filed*

20 Whitney Road  
Newton, Massachusetts 02460  
(617) 964-1548  
[dnicholas100@gmail.com](mailto:dnicholas100@gmail.com)

*ATTORNEYS FOR PLAINTIFFS*